

NAME _____

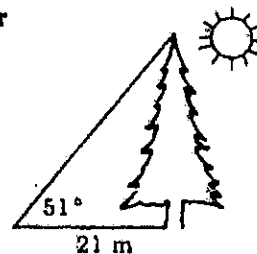
DATE _____

SCORE _____

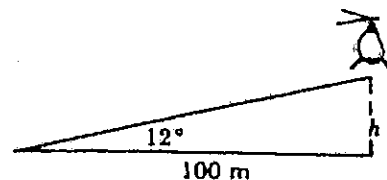
Using Trigonometric Ratios + p374 #s 8,13

In Exercises 1-7, express the lengths correct to the nearest meter and angle measures correct to the nearest degree. Use the table on page 271 in the text.

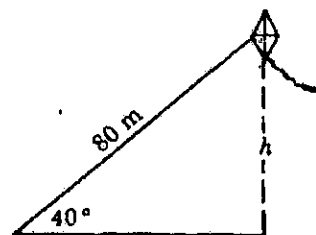
1. A tree casts a shadow 21 m long. The angle of elevation of the sun is 51° . What is the height of the tree? _____



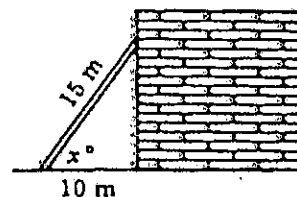
2. A helicopter is hovering over a landing pad 100 m from where you are standing. The angle of elevation with the ground is 12° . What is the altitude of the helicopter? _____



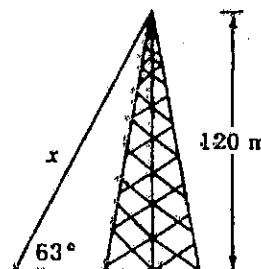
3. You are flying a kite and have let out 80 m of string. The angle of elevation with the ground is 40° . If the string is stretched straight, how high is the kite above the ground? _____



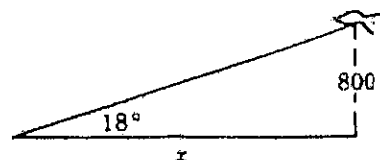
4. A 15 m pole is leaning against a wall. The foot of the pole is 10 m from the wall. Find the measure of the angle the pole makes with the ground. _____



5. A guy wire reaches from the top of a 120 m television transmitter tower to the ground. The wire makes a 63° angle with the ground. Find the length of the guy wire. _____



6. A small airplane climbs at an angle of 18° with the ground. Find the horizontal distance it has flown when it has reached an altitude of 800 m. _____



7. An operator at the top of a lighthouse sights a sailboat. The point from which the sighting is made is 25 m above sea level. The angle of depression of the sighting is 10° . How far is the boat from the base of the lighthouse? _____

